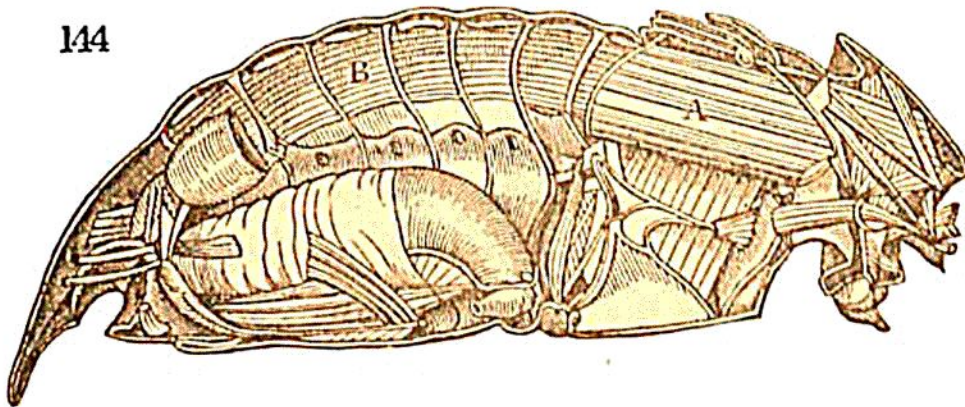


§ 2. *Insecta alata.*

OUR attention is now to be directed to the more highly developed Insects, which have been formed with a view to progression through the air. On these, which compose the most extensive class of the whole animal kingdom, Nature has lavished her choicest gifts of animal powers, as far as they are compatible with the diminutive scale to which she has restricted herself in their formation. The model she has chosen for their construction is that which combines the greatest security against injurious impressions from without, with the most extensive powers of locomotion; and which also admits of the fullest exercise of all those faculties of active enjoyment which are characteristic of animal life. She has provided for the first of these objects by enclosing the softer organs in dense and horny coverings, which perform the office of an external skeleton, sustaining and protecting the viscera, and furnishing extensive surfaces of attachment to the muscles, from the action of which all the varied movements of the system are derived.

The muscular system of perfect insects is exceedingly complex. Lyonet has described and delineated an immense number of muscular bands in the caterpillar of the *Cossus*, and the plates he has given have been copied in a variety of books in illustration of this part of the structure of insects. The recent work of Straus Durckheim affords an

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equally striking example of admirable arrangement in the muscles of the *Melolontha vulgaris*, or cockchafer, the ana-